



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/857,762	06/08/2001	Sang-Young Lee	A34350 PCT U	9624
21003	7590	10/24/2003	EXAMINER	
BAKER & BOTTS			VO. HAI	
30 ROCKEFELLER PLAZA			ART UNIT	
NEW YORK, NY 10112			PAPER NUMBER	

1771

DATE MAILED: 10/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/857,762	LEE ET AL.	
	Examiner	Art Unit	
	Hai Vo	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) 10-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>082401</u> . | 6) <input type="checkbox"/> Other: _____ |

Election/Restriction

1. Applicant's election without traverse of Group I, claims 1-9 and 20 in the amendment received on 08/20/2003 is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 20 provides for the use of the microporous film, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.
4. Claim 20 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1771

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 4-9 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by WO 96/27633. Hasegawa et al (US 6,127,438) is an equivalent form of WO 96/27633 and relied on as a translation of WO 96/27633. Hasegawa discloses a microporous film useful as a battery separator comprising a blend of polypropylene and polyethylene by using a casting (column 5, lines 45-50). Hasegawa discloses the microporous film is produced by annealing and stretching (column 6, lines 55-65, column 8, lines 50-55). Hasegawa discloses the microporous film having been treated with an electron beam after removing the plasticizer by extraction (column 3, lines 30-45). Since the removal of the plasticizer by extraction causes the pore formation within the film, it is clearly apparent that the electron beam is irradiated after the pore formation. Hasegawa discloses the surface treatment irradiation with ionizing radiation improves the mechanical properties of the film (table 1). Hasegawa discloses the electron beam irradiation being conducted by using the oxygen and nitrogen gases (column 8, lines 25-35). It is the examiner's position that Hasegawa anticipates the claimed subject matter.

7. Claims 1, 2 and 4-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Exsted et al (US 6,010,776). Exsted discloses a microporous film comprising a blend of polypropylene and polyethylene by using a casting (column 4, lines 45-46). It appears that Exsted is using the same polymeric materials to form the microporous film, ^{and} it is the examiner's position that the melting point difference of the two polymers in the blend would be inherently present. This is in line with *In re Spada*, 15 USPQ 2d 1655 (1990) which holds that products of identical chemical composition can not have mutually exclusive properties. Exsted discloses the microporous film is produced by annealing and stretching (examples 1-4). Hasegawa discloses the microporous film having been treated with an electron beam after the pore formation (column 8, lines 25-45). Hasegawa discloses the surface treatment irradiation with ionizing radiation improves the hydrophilicity of the film (column 10, lines 35-40). Hasegawa discloses the electron beam irradiation being conducted by using the oxygen ions (column 8, lines 25-35). It is the examiner's position that Exsted anticipates the claimed subject matter.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 96/27633 in view of Nishiyama et al (US 5,480,745). Hasegawa does not specifically disclose that the mix blend comprising two or more of polyolefin mixtures having a melting point difference over 10°C. Nishiyama discloses a microporous film useful as a battery separator comprising a mixture of 70 parts of polypropylene and 30 parts of polyethylene (example 1) within the claimed range. It appears that Hasegawa as modified by Nishiyama is using the same polymeric materials to form the microporous film, ^{and} it is the examiner's position that the melting point difference of the two polymers in the blend would be inherently present. This is also in line with *In re Spada*. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the blend comprising polypropylene and polyethylene to form the microporous film motivated by the desire to balance the electric resistance and mechanical strength of the microporous film, which is important to the invention of Hasegawa, thus further suggesting the modification.
10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Exsted et al (US 6,010,776) in view of Jacoby et al (US 5,176,953). Exsted does not specifically disclose that the weight ratio of the polypropylene and polyethylene. Therefore, it is necessary and thus obvious for the skilled artisan to look to the prior art for the suitable weight ratio of such two polymers. Jacoby discloses a microporous film useful as a diaper comprising

Art Unit: 1771

a mixture of 95 to 5 parts by weight of polypropylene and 5 to 95 parts by weight of an ethylene-propylene block copolymer having an ethylene content of 10 to 50 wt% (column 4, lines 45-52) within the claimed range. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to employ the blend comprising polypropylene and polyethylene having a weight ratio ^{as} instantly claimed motivated by the desire to obtain the microporous film having desirable strength and breathability properties, which is important to the invention of Exsted, thus further suggesting the modification.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Vo whose telephone number is (703) 605-4426. The examiner can normally be reached on M,T,Th, F, 8:30-6:00 and on alternating Wednesdays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (703) 308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Hai Vo

DANIEL ZIRKER
PRIMARY EXAMINER
GROUP 1300
1700

Daniel Zinker